

R E M A R K S

The office action of September 22, 2006 has been reviewed and its contents carefully noted. Reconsideration of this case, as amended, is requested. Claims 1 and 4 through 10 remain in this case, claims 2-3 being cancelled and claims 7-10 being added by this response.

The numbered paragraphs below correspond to the numbered paragraphs in the Office Action.

The claims were amended to clarify the subject matter being claimed, to correct typographical errors, and other informalities. No new matter was introduced. Support for the amendments are found on pages 8-11 of the specification and in Figures 3-7.

Objections to the Drawings

1. The drawings were objected to under 37 CFR 1.83(a) for failing to show every feature of the invention specified in the claims.

While the elements have been removed from the claims, Applicant still amended the drawings and the specification for clarity. The "rotor" and "housing" elements in the claims were in the application as originally filed on page 13, lines 27-28 and page 14, lines 11-14. Applicant has added the description from page 13 and 14 to a paragraph on page 6 of the specification describing the phaser. Applicant has also added reference numbers to Figure 1 indicating the rotor and housing. No new matter has been entered. Reconsideration and withdrawal of the objections are respectfully requested.

Rejection(s) under 35 U.S.C. §112

3. Claims 1-6 were rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point and out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant has amended claims 1 and 4-6 and cancelled claims 2-3. Applicant believes that these amendments have fully addressed the Examiner's rejections, and the claims are now in

condition for allowance. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection(s) under 35 U.S.C. §102

5. Claims 1-6 were rejected under 35 U.S.C. 102(b) as being anticipated by Smith (US Patent No. 6,453,859). Applicant respectfully disagrees with the rejection.

Smith discloses a phaser that may change from cam torque actuated (CTA) mode to an oil pressure actuated (OPA) mode in response to a centrifugally operated control valve. At low rotation speeds, the phaser is in the CTA mode and at high rotational speeds the phaser in OPA mode. The movement of the spool in the valve is controlled by a variable force solenoid and a controller. In the neutral position in which no oil flows into or out of the chambers, "the solenoid can be operated with some dither in either FIG. 10 or the FIG. 13 conditions...to permit some small flow of make-up oil into the chambers to replace any oil lost by leakage therefrom." (Col. 11, lines 42-60).

Dither is discussed in Smith only for providing make-up oil to compensate for leakage in the phaser. Smith does not teach or suggest any relationship between dither and engine speed. Smith also does not disclose nor teach repeatedly moving the spool valve towards the advance position and retard position at a rate related to engine rotational speed, where the movement of the spool valve permits oscillation of the phaser through fluid movement.

Therefore, it is respectfully suggested that the rejection of independent claim 1 as being anticipated by Smith (US Patent No. 6,453,859) is overcome. Dependent claims 4, 6-10, being dependent upon and further limiting independent claim 1, should also be allowable for that reason, as well as for the additional recitations they contain. Reconsideration and withdrawal of the rejection are respectfully requested.

Conclusion

Applicant believes the claims, as amended, are patentable over the prior art, and that this case is now in condition for allowance of all claims therein. Such action is thus respectfully requested. If the Examiner disagrees, or believes for any other reason that direct contact with

Applicants' attorney would advance the prosecution of the case to finality, he is invited to telephone the undersigned at the number given below.

"Recognizing that Internet communications are not secured, I hereby authorize the PTO to communicate with me concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file."

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